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Service readout and Service Data Tool with JUMBO Care 2nd generation

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Contents

Preface 4

Service intervals
What is the service interval presetting ? 5
How do I see on the control box that it is time for service ? 5
When does the service time start counting ? 5
How to change to another service interval ? 5

Read out service data on a JUMBO Care with display 6

Before getting started with read out service data on a laptop
Equipment needed to read out service data 7
How to connect the equipment and get started 7

Read out service data on a laptop 8

Actuators
What to do if there is an overload situation 9
Description of work indicator, cycles and cutoff limit 9
How to conclude on the service information 10

Control box
How to know when battery needs charging ? 10

Controls
Description of hand control code 11

Report
How to fill in Service Report ? 12
How to save Service Report ? 12
How to reset service counters after service ? 13

Advanced settings
How to change service interval ? 14
How to exchange the control box and maintain service data ? 14
How to exchange an actuator 14

Resetting of service interval after service has been carried out 15

Info site 15

Addresses 16

Preface

We are delighted that you have chosen a product from LINAK.

Your new JUMBO Care control box has a microprocessor inside making it possible to read out service data via the Service Data Tool and via the display (if available on your control box). In this manual you can read about how to use the service function and get the full benefit of it in your JUMBO Care.

If no drivers are installed on your laptop (if you never have used service data tool on your laptop before), please contact your local sales representative to get access to the IB300001 user manual in which this procedure is explained.

If you experience any problems with your new JUMBO Care, you are always welcome to contact your local LINAK representative who will be able to help you.

LINAK A/S

Service Intervals

What is the service interval presetting?
A standard JUMBO Care control box will be pre-set with a service interval of: 12 months / 8000 cycles, whichever comes first.

How do I see on the control box that it is time for service?

The notice about service need depends upon the JUMBO Care version:

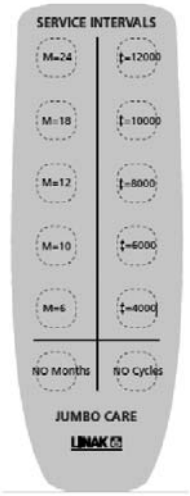
- **No indicators on the front cover:** one single beep telling that it is time for service
- **Diodes on the front cover:** The service diode will light up and one single beep will tell that it is time for service
- **Display:** The display will show the service symbol and one single beep will tell that it is time for service.

When does the service time start counting?
The service time will start to count down from the day the control box is produced.

How to change to another service interval?
The service interval can be changed via a special LINAK handset (Item number HB8646V2010 + 71). To change the service interval you simply plug in the handset in the JUMBO Care and press the button. You can choose from a number of months or cycles between services. You can also choose 'NO months' or 'NO cycles'.

E.g. Push M = 24, Push ↕ 10000.
The JUMBO Care is now set to indicate service need every 24 month or at 10000 cycles, whichever comes first.

After having set a different service interval, the control box will provide an audio sound (as a receipt).



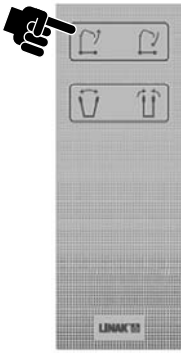
Read out service data on a JUMBO Care with display

When you have a JUMBO Care with display, it is possible to have some basic service data on the display. To get this information on the display, press the "*lifting arm up*" button on your LINAK hand control or control box (short press ½ second).

The information that appears on the display is;

CBJ Care read out service data

HB80



HB70

------> Total cycles made by the lifting actuator (channel 1)
------> Total work made by the lifting actuator (channel 1)
------> Total number of overloads (channel 1)
------> Days since last service/days between services

Before getting started with reading out service data on a laptop

Equipment needed to read out service data

When reading out service information on a laptop you need:

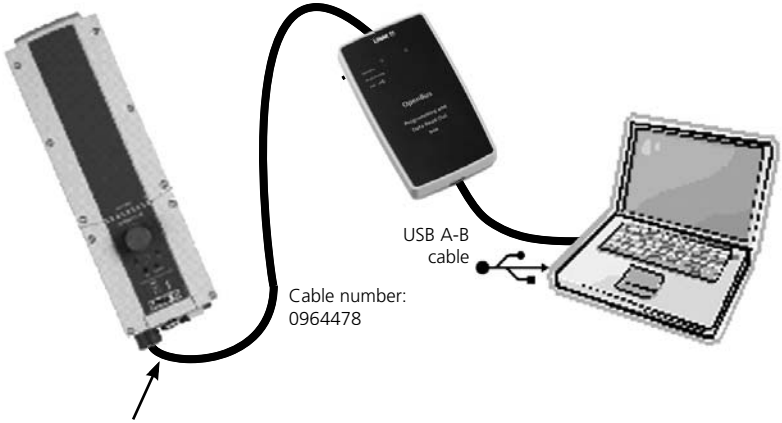
- Service Data Tool 2 version 2.5.0 or a newer version installed on the laptop. The software will be provided from your local LINAK sales representative
- An OpenBus programming and data readout box (item number IB300001)
- A service readout cable (LINAK item number 0964478)
- One USB A-B cable

How to connect the equipment and get started

A) First of all, make sure that Service Data Tool drivers and the Service Data Tool 2 software (version 2.5.0 or higher for JUMBO Care 2nd generation) is installed on your laptop. If Service Data Tool drivers and the Service Data Tool software are not installed, please see the SDT2 user manual.

B) Connect the equipment as shown below.

JUMBO Care



The service readout cable (item number 0964478 / 0964198) has to be connected via the HB port. It is also possible to use a T-cable (item number 0015412-A) for connection of hand control and Service Data Tool 2 at the same time.

Please note! The T-cable is needed if you do not have an activation button on the JUMBO Care control box.

When connection is observed, the red LED ("*Supply 8V Missing*") in the current laptop window changes to green.

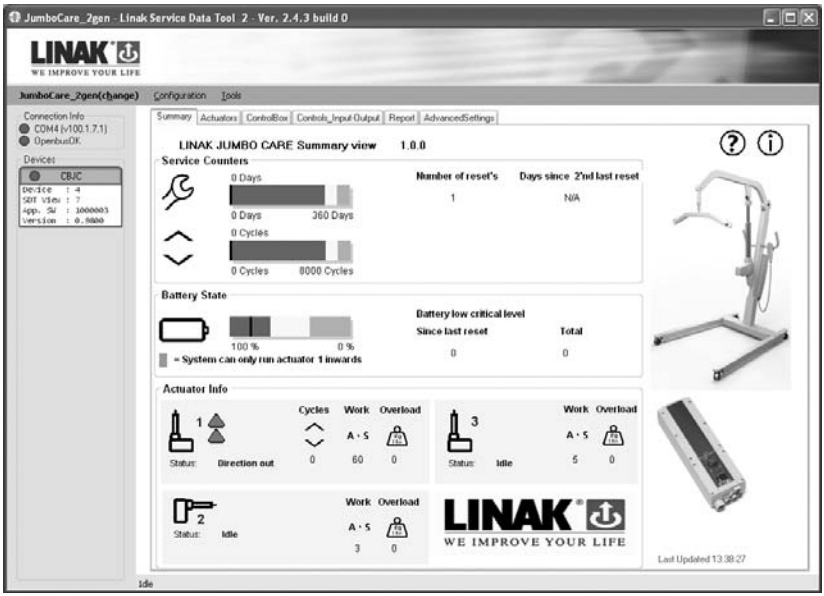
C) Wake the control box (by pressing a button on the hand control or a button on the CB for operation of lifting/lowering).

D) Enter the Start menu on your laptop

and choose the LINAK program to open the Service Data Tool

Reading out service data on a laptop

Ensure that the JUMBO Care view is initiated by pressing the menu shown.
Please contact your local LINAK supplier for support if this is not the case.



It is possible to switch between service data tool views for Jumbo care 1st and 2nd generation by pressing the menu - "Jumbo Care_2gen". The text will vary depending on the last activated view.

Please notice that Service data tool version Jumbo Care_2gen can be used for systems with CBJ Care **2gen control boxes.**

CBJ-C 2.Gen.

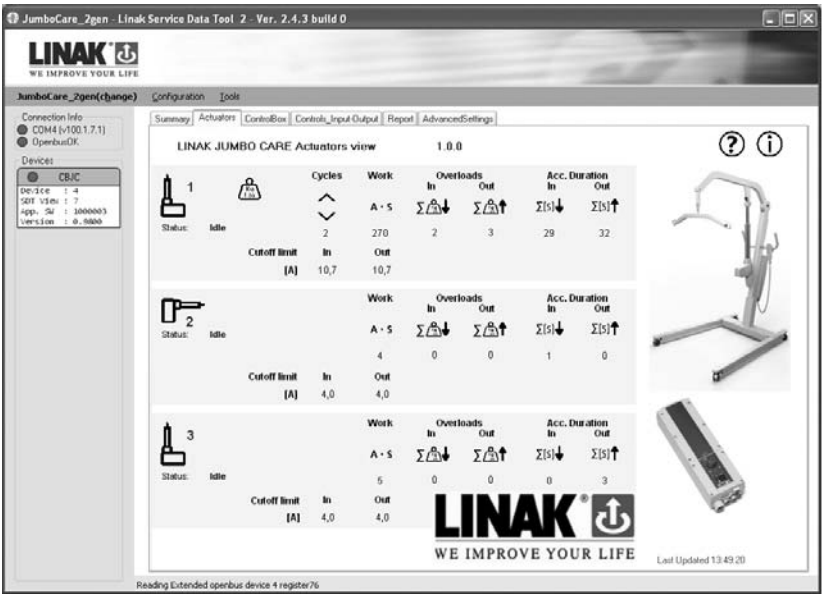
"JumboCare_2gen" Service data tool can also work with CBJ Care 1st gen. control boxes produced after July 2013 - see production date on the product label.

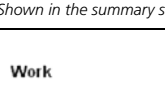
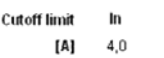
The Service Data Tool for Jumbo Care 2nd generation is divided into sections: Summary | Actuators | ControlBox | Controls_Input Output | Report | AdvancedSettings

Section	Used for…..
Summary	For quick and easy overview of service indicator, battery status and actuator statistics
Actuators	For detailed information about the actuators' statistical service data
Control box	For detailed information about the control box and battery state
Controls_InputOutput	For detailed information about hand control signals and codes
Report	For service reporting and resetting of service counters via hand control after saving report
Advanced settings	**Intended for trained and authorised service technicians only.** For change of service settings and update of actuator info if the control box is replaced to maintain service data. For update of information when replacing the actuator

For further help and recommendations on each section, please press the help icon ⓘ or see next page.

Actuators



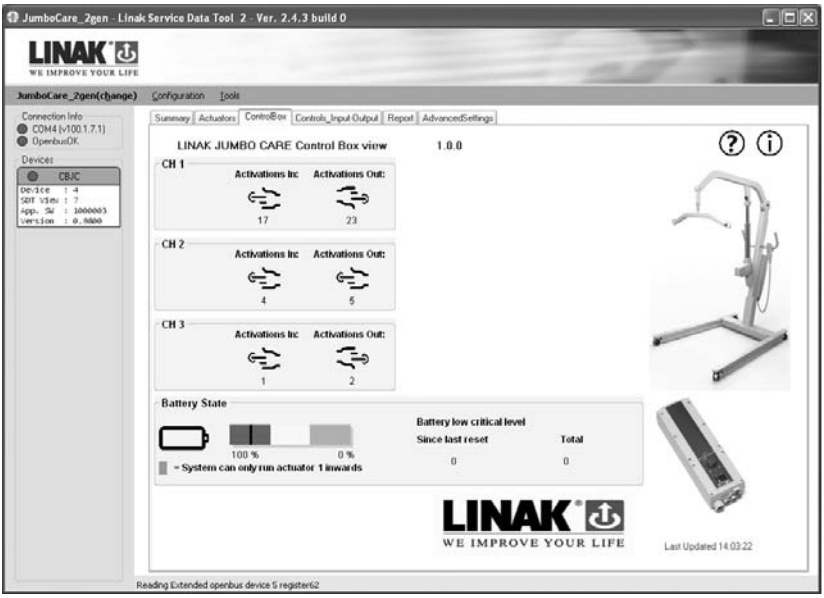
Symbol	Service data description and recommendations
	If the overload symbol is shown next to the actuator there is currently an overload situation. Reduce the load on the actuator. If a buffer actuator is used, the amount of overloads is an expression of how many times the actuator has run into end-stop and been overloaded.
 Shown in the summary section	**Total overloads CH1:** Counts the number of times the actuator on channel 1 has been overloaded. If the actuator has been overloaded, we recommend lifting equipment with higher load capacity. The indicator can only be reset by exchanging the actuator through Service Data Tool "*actuator*" menu. Channels 2 and 3: If a buffer actuator is used, the amount of overloads is an expression of how many times the actuator has run into end-stop and been overloaded
	**Total work CH1 (A*S):** Work indicator for the actuator on channel 1 measures via ampere usage * seconds in use. The work indicator gives a very good indication of how worn the actuator is. Typical minimum lifetime performance without abuse of the actuator LA23: 10.000 cycles in life test equals: 1.500.000 A*S LA31: 10.000 cycles in life test equals: 2.900.000 A*S LA34: 10.000 cycles in life test equals: 4.200.000 A*S LA43: 10.000 cycles in life test equals: 3.750.000 A*S LA44: 10.000 cycles in life test equals: 5.600.000 A*S The indicator can only be reset by exchanging the actuator through Service Data Tool "*Advanced Settings*" menu. Please contact the lift manufacturer in order to decide when it is appropriate to consider exchanging the actuator.
	Total cycles: The total number of cycles made by the actuator on channel 1. One cycle is defined as; Driving with load (the actuator draws more than 1.5 Amps). Driving direction up for a minimum of 5 seconds (several activations are allowed), followed by driving down for a minimum of 2 seconds. The indicator can only be reset by exchanging the actuator through Service Data Tool *"Advanced Settings"* menu or by pressing the up and down button on channel 1 for 5 seconds.
	**Cut-off limit:** To ensure that the lift will stop if the current draw exceeds the preset limits. The best way to set the cut-off limit is via learn mode.

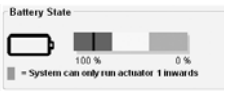
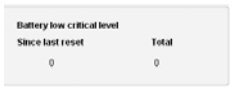
How to conclude on the service information

Total cycles and total work:
Please contact the lift manufacturer in order to decide when it is appropriate to consider exchanging the actuator.

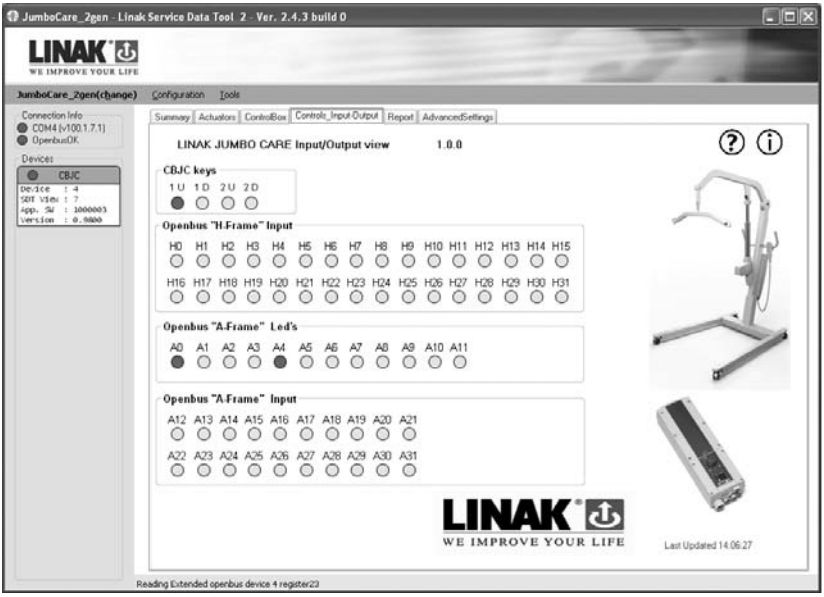
Overload:
If overload has occurred it is recommended to consider stronger lifting equipment with higher working load for the particular patients/institution.

Control box



Symbol	Data description and recommendations
	Read out how many times a hand control button or the button on the control box has been activated on CH1.
	**Battery state:** **Green;** battery fully charged (approx. 100-50% capacity remaining) **Yellow;** battery approx. half charged (approx. 50-25% capacity remaining) **Orange;** Battery empty (incl. audio signal when the hand control is activated). Limited actuator function. Good battery behaviour is charging the battery at all times when it is not in use. Deep discharging of the battery can cause damage of the battery.
	**Since last reset:** Number of times the control box has detected a critical battery level. If batteries are switched between lifts, it does not say anything about the battery condition. It is only an indication of the battery behaviour. The "*Battery low critical level*" counter will be reset after each service reset, but it will be saved if making a report. **Total** Number of times the control box has detected a critical battery level. If batteries are switched between lifts, it does not say anything about the battery condition. It is only an indication of the battery behaviour. The number of critical battery levels will not be valid if the emergency stop button is used as an on/off power button and not for emergency situations only.

Controls


JumboCare_2gen - Linak Service Data Tool 2 - Ver. 2.4.3 build 0
LINAK
WE IMPROVE YOUR LIFE
JumboCare_2gen(change)
Configuration
Tools
Connection Info
COM4 (v100.1.7.1)
OpenbusOK
Devices
CBJC
Summary
Actuators
ControlBox
Controls_Input-Output
Report
AdvancedSettings
LINAK JUMBO CARE Input/Output view
1.0.0
CBJC keys
1U 1D 2U 2D
Openbus "H-Frame" Input
H0 H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 H11 H12 H13 H14 H15
H16 H17 H18 H19 H20 H21 H22 H23 H24 H25 H26 H27 H28 H29 H30 H31
Openbus "A-Frame" Led's
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11
Openbus "A-Frame" Input
A12 A13 A14 A15 A16 A17 A18 A19 A20 A21
A22 A23 A24 A25 A26 A27 A28 A29 A30 A31
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Last Updated 14.06.27
Reading Extended openbus device 4 register23

If a diode (or hand control button) is activated, one of the coded buttons will light up as the example above shows.

Codes	Code explanation
CBJC keys 1U 1D 2U 2D	Up and down buttons on the CBJC control box. HB40 like signals
Openbus "H-Frame" Input H0 H1 H2 H3 H4 H5 H6 H7 H8 H9 H10 H11 H12 H13 H14 H15 H16 H17 H18 H19 H20 H21 H22 H23 H24 H25 H26 H27 H28 H29 H30 H31	**OpenBus** signals
Openbus "A-Frame" Led's A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11	**OpenBus Diode** signals
Openbus "A-Frame" Input A12 A13 A14 A15 A16 A17 A18 A19 A20 A21 A22 A23 A24 A25 A26 A27 A28 A29 A30 A31	**OpenBus button** signals

Report

After each service visit it is recommended to fill in the service report and press "*save*" to maintain service data.

Data	Recommended procedure and explanation
	These data are filled in automatically.
	Fill in these data.
	Description made in this box will be read out when the report is saved.
	Choose up to 4 notes after the service visit. Messages for the next service visit - will be stored and readable at the next visit.
	Up to 4 notes readable from the previous service visit
	Check the lift extra well on the marked spots. Action is recommended in case of noteworthy observations.

When the lift has been checked and the information completed, press "*save*" to save as html or a comma separated file. Relevant actuator statistics and system data will be included in the report.

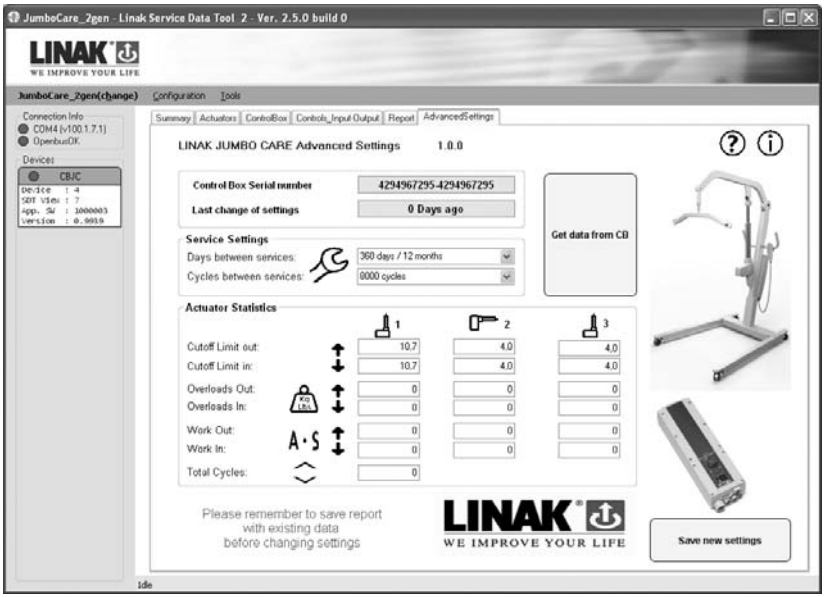
Resetting the service counters:
- Days since last service
- Cycles since last service

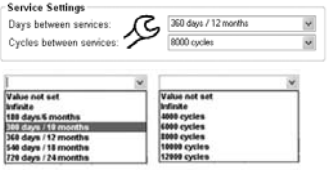
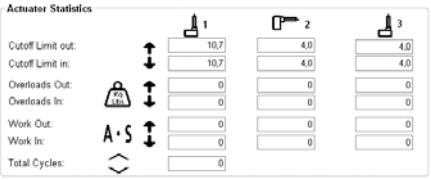
Resetting of service is made by pressing 2 buttons on the hand control or the control box at the **same time for 5 seconds.** The reset buttons are predefined as lifting arm up and lifting arm down.

An audio signal will indicate that the timer has been reset.

Advanced settings

Please note! This section is only intended for trained and authorised service technicians



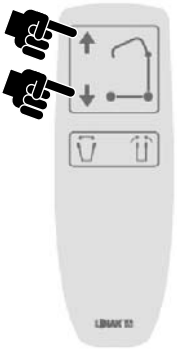
Data	Recommended procedure and explanation
	Control box serial number: This number is unique and can be found on the label of the control box. It will be updated automatically if the control box is replaced and cannot be changed. L**ast change of settings:** The date of the last programming is shown and cannot be changed, it will be reset when pressing "*Save new settings*". It will also be reset when service settings are changed via the special LINAK HB.
	**Service settings**: The settings are automatically shown, but they can be changed via the drop-down menu. It is also possible to insert days and cycles in service settings which are not available on the drop down list. Only requirement is – the setting of days must be dividable with 30 to calculate the months.
	**Actuator info:** Remember to update actuator info **if the control box is exchanged.** In this way you maintain the statistical service data information on the actuators. Remember to update "cut-off limit out" and "cut-off limit in" and all other figures if **an actuator is replaced.**

	Get / retrieve data from the control box: When entering new data, the data will be visible with bold script. "Get data from CB" undo changes and retrieve existing data from the control box.
	Remember to save report with existing data before changing settings **Save new settings:** This will reset the above information with the new data filled in.

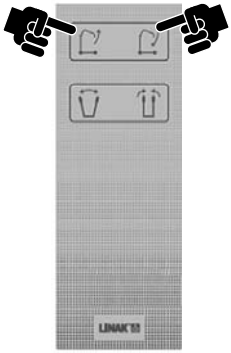
Resetting of service interval after service has been carried out.

Resetting of service is done by pressing 2 buttons (lifting arm up and lifting arm down on the hand control or on the control box at the same time for 5 seconds. (Buttons that need to be pressed might differ depending on hand control type or control box). After pressing the buttons for 5 seconds, you will receive an audio signal indicating that the timer has been reset. The timer will reset the diodes/clear the display for service symbol, and start counting a new service period.

Resetting of service interval



HB80



HB70

Info Site

The lift manufacturer can add one information site per section and it is accessible via the icon ⓘ

The information site may include further information e.g. service checklist for the service technician to follow, Lift guidance by lift type etc.

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